

Claims

1. A hydrostatic multimotor drive unit with at least two gearless, hydraulic motors acting upon a common load,
characterised in that,
the hydraulic motors (2,3) are arranged in a closed hydraulic circuit (6,7), in which for supplying the pressure medium to the two motors (2,3) at least one variable displacement pump (5) is envisaged, where the motors (2,3) are connected with each other by at least one freewheel device (4), where the motor (2) arranged after the freewheel device has a variable displacement volume.
2. A hydrostatic multi-motor drive unit in accordance with claim 1,
characterized in that,
that least one pressure sensor in the pipe(s) between motors (2,3) and pump (5) is envisaged for distinguishing between the operating states of accelerating or decelerating.
3. A hydrostatic multi-motor drive unit in accordance with claim 1 or 2,
characterized in that,
the motors (2,3) are connected in parallel with the freewheel device (4) through a controllable coupling (14).
4. A hydrostatic multi-motor drive unit in accordance with claim 3,
characterized in that,
the motors (2,3) with the freewheel device (4) and the controllable coupling (14) are arranging in one casing.
5. A hydrostatic multi-motor drive unit in accordance with one of the preceding claims,
characterized in that,
an electronic control unit (microprocessor) is envisaged for driving the variable displacement hydrostatic pump (5) and/or motors (2,3) .
6. A procedure for influencing the power and/or the direction of rotation of the drive unit, in particular in accordance with claim 3,
characterized in that,

the displacement volume of the pump (5) varies and/or the volume of a motor (2) diminishes and/or increases and the volume of further motors (3') decreases or increases and that for backwards travel a controllable clutch (14) is locked.

7. A procedure in accordance with claim 6 for accelerating a multi-motor drive unit in the forwards direction, **characterized in that** first the displacement volume of the pump (5) is increased, for further increasing the rotational speed the volume of a first motor (2) is reduced and if necessary the volume of the further motor (3') is reduced.
8. A procedure in accordance with claim 6 for decelerating a multi-motor drive unit, **characterized in that** through the pressure sensor(s) in the pipe the change of pressure in the system is recognized and the displacement volume of the motor (s) (2) arranged after the freewheel device (4) is set to zero and the decelerating behavior of the drive unit is influenced by adjusting the displacement volume of the pump (5).
9. A procedure in accordance with claim 6 for accelerating a multi-motor drive unit in the reverse direction, **characterized in that**, the delivery direction of the pump (5) is reversed, the displacement volume of the pump (5) is increased and to further increase the rotational speed the volume of the motor (2) is reduced.
10. A control procedure for accelerating a multi-motor drive unit in accordance with claim 6 in the reverse direction **characterized in that**, the coupling (14) is locked and the delivery direction of the pump (5) is reversed, the displacement volume of the pump (5) is increased, for further increasing the rotational speed the volume of a first motor (2) is reduced and if necessary the volume of the further motor (3') is reduced.
11. A mobile machine with a hydrostatic multi-motor drive unit in accordance with one or more of the claims 1 to 5.